TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT

SDLF Platinum-Level of Governance

PLATINUM LEVEL

President – Kevin Graves • Vice-President –Ashley Porter • Director – Bryon Gutow • Director – Michael Callahan • Director – Carolyn Graham

NOTICE OF THE REGULAR MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday, November 2, 2022, 5:30 P.M.

NOTICE
Coronavirus COVID-19

In response to the current proclaimed State of Emergency, indoor masking recommendations, and recommended measures to promote social distancing imposed by State and local officials, the Town of Discovery Bay Community Services District Board of Directors has arranged for members of the public to observe and address the meeting telephonically (if available) or in person.

TO ATTEND IN PERSON: The meeting will be held at the Community Center located at 1601 Discovery Bay Boulevard.

TO ATTEND BY WEBINAR:
Please register for the Water and Wastewater Committee Meeting by: (*copy and pasting into your browser the registration URL. You will then be directed to download the webinar to your device and register with LogMeIn, Inc.)*

Registration URL: https://attendee.gotowebinar.com/register/8917503721849168143
Webinar ID# 778-140-635

After registering, you will receive a confirmation email containing information about joining the webinar by computer or by phone.

For listen only mode dial: +1 (415) 930-5321 **ID#** 125-374-432

Download Agenda Packet and Materials at **www.todb.ca.gov**

Water and Wastewater Committee Members
Chair Kevin Graves
Vice-Chair Ashley Porter

A. ROLL CALL
1. Call business meeting to order 5:30 p.m.
2. Roll Call.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)
During Public Comments, the public may address the Committee on any issue within the District's jurisdiction which is not on the Agenda. The public may comment on any item on the Agenda at the time the item is before the Committee for consideration. Any person wishing to speak will have 3 minutes to make their comment. There will be no dialog between the Committee and the commenter as the law strictly limits the ability of Committee members to discuss matters not on the agenda. We ask that you refrain from personal attacks during comment, and that you address all comments to the Committee only. Any clarifying questions from the Committee must go through the Chair. Comments from the public do not necessarily reflect the viewpoint of the Committee members.

C. DRAFT MINUTES TO BE APPROVED

1. Approve Regular Water and Wastewater DRAFT Meeting minutes of October 5, 2022.

D. PRESENTATIONS

E. UPDATES

1. Diffuser Project Update
2. Grants Update

F. DISCUSSION

1. Discussion Regarding Authorizing Luhdorff & Scalmanini to Provide Design and Construction Engineering Services for Willow Water Treatment Plant Filter #1 Addition; and Authorizing the General Manager to Enter into a Purchase Contract with Loprest for a 2,200 GPM Filter Vessel.

2. Discussion with Possible Action Regarding Cancellation of the January 4, 2023, Standing Water & Wastewater Committee Meeting.

G. FUTURE DISCUSSION/AGENDA ITEMS

H. ADJOURNMENT

1. Adjourn to the next Standing Water and Wastewater Committee meeting on December 7, 2022, at the Community Center located at 1601 Discovery Bay Boulevard.

“This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting.”

"Materials related to an item on the Agenda submitted to the Town of Discovery Bay after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."

TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT
SDLF Platinum-Level of Governance
PLATINUM LEVEL
President – Kevin Graves • Vice-President –Ashley Porter • Director – Bryon Gutow • Director – Michael Callahan • Director – Carolyn Graham

MINUTES OF THE REGULAR MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday, October 5, 2022, 5:30 P.M.

Water and Wastewater Committee Members
Chair Kevin Graves
Vice-Chair Ashley Porter

A. ROLL CALL

1. Meeting called to order at 5:30 p.m.
2. Roll Call was taken and all members were present.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

None.

C. DRAFT MINUTES TO BE APPROVED

1. Approve Regular Water and Wastewater DRAFT Meeting minutes of September 7, 2022.

Vice-Chair Porter made a Motion to Approve the Draft Minutes.
Chair Graves second.
Vote: Motion Carried – AYES: 2, NOES: 0, ABSTAINED: 0, ABSENT: 0

D. PRESENTATIONS

None.

E. UPDATES

1. Diffuser Update

Presented by Gregory Harris, Herwit Engineering.

- All agreements with REC 800 have been signed.
- Underwater Resources is scheduled to come out the week of October 10, 2022, to do the initial dive.
- All previously purchased parts were returned with a small restocking fee.
- Vac truck will be used to remove sediment.

2. Clipper Drive/Newport Blvd Bridge Pipe Replacement Update

Presented by Water and Wastewater Manager, Aaron Goldsworthy.

- The pipe is about 20 years old. Staff is determining the best material for replacement.
- Glass-infused ductile pipe is about eight weeks out for delivery.
- Veolia was asked to consult on ideas for repair.
- Chair Kevin Graves commended District staff and Veolia for the quick response on the matter.
- Vice-Chair reiterated Chair Graves' compliments.

F. DISCUSSION

G. FUTURE DISCUSSION/AGENDA ITEMS

H. ADJOURNMENT

1. Meeting adjourned at 5:44p.m. to the next Standing Water and Wastewater Committee meeting on November 2, 2022, at the Community Center located at 1601 Discovery Bay Boulevard.

“This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting.”

"Materials related to an item on the Agenda submitted to the Town of Discovery Bay after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."

HERWIT ENGINEERING

DAILY CONSTRUCTION REPORT

PROJECT TITLE: TDBCSD Diffuser

OWNER: Town of Discovery Bay CSD

CONTRACTOR: Underwater Resources Inc.

JOB NUMBER: 2019-135 T02

ON-SITE ENGINEER: Gregory Harris

DATE: 10/14/22
WEATHER: Clear
SITE CONDITION: Good
TEMPERATURE: Warm

Contacts- URI, Ryan

Veolia: Anthony
Town: Aaron. Mike Y.

Work Force- URI
Equipment on site: Pickup truck with dive equipment.

Activities-

- Initial safety meeting at Plant No.2. Then went to Old River
- Did preliminary inspection. All 36 ports present and in good shape.
- Cleaned all ports down to top flange connection.
- Did final detailed inspection report. Ports on 6" portion of pipe were plugged with no flow. All other ports working well.
- Live and recorded video of all underwater activity.
- Used rod to clean last 6 ports. Massaged them and got lots of snails to come out. 5 of 6 ports now flowing. Last one plugged.
- They will provide video and detailed final report.
- Inspected Outfall Pipe with Anderson. Some corrosion damage. Reviewed changes for Rec 800 valve and wye fitting to allow vac truck to suck out diffuser.


10/14/2022 07:21


10/14/2022 08:55


10/14/2022 08:59


10/14/2022 09:08


10/14/2022 10:50


URI
10/14/2022 11:17


REC
10/14/2022 11:17


REC
10/14/2022 11:20


10/14/2022 11:25


10/14/2022 11:17


175 ft.
10/14/2022 11:01


10/14/2022 11:08


10/14/2022 11:07


10/14/2022 11:04

Town of Discovery Bay

"A Community Services District"

STAFF REPORT

Meeting Date

November 2, 2022

Prepared By: Luhdorff & Scalmanini Consulting Engineers
Submitted By: Dina Breitstein, General Manager

Agenda Title

Discussion Regarding Authorizing Luhdorff & Scalmanini to Provide Design and Construction Engineering Services for Willow Water Treatment Plant Filter #1 Addition; and Authorizing the General Manager to Enter into a Purchase Contract with Loprest for a 2,200 GPM Filter Vessel.

Recommended Action

Recommend to the Board:

a. Approve the Scope and Budget Contained in the Luhdorff & Scalmanini ("LSCE") Proposal Dated October 26, 2022, to Provide Design and Construction Engineering Services for the Willow Water Treatment Plant Filter #1 Addition.

b. Authorize the General Manager to Execute the Town's Standard Form of Professional Services Agreement with LSCE to Provide Design and Construction Engineering Services in an Amount Not to Exceed $180,095 plus 15% for contingencies.

c. Authorize the General Manager to Enter into a Purchase Contract with Loprest for a 2,200 GPM Filter Vessel in the amount of $420,000 plus 15% for Tax and Contingencies.

Executive Summary

At the June 1, 2022, Water and Wastewater Committee meeting, LSCE provided a presentation regarding the need to replace the capacity of filters A & C at the Willow Water Treatment Plant with one larger filter. The Phase 1 project will consist of all necessary site improvements and modifications to incorporate the new Filter #1 vessel (rated to 2,200 gpm) with the existing Filter B (rated to 850 gpm). The purpose of the project is to ensure reliability of the Willow WTP filtration capacity needs to meet the current demands of the system. The Phase 2 project would occur approximately 10 years or more from now depending on system demands and would include removing and replacing filters A, B and C with another 2,200 gpm filter.

When construction costs are added later, the overall Phase 1 project cost is estimated at $1.4 million plus 15% for contingencies. This includes design and construction support services, prepurchase of the new filter vessel, and site construction activities.

LSCE has developed the attached engineering services proposal to provide design and construction management services associated with installation of a new filter (Filter #1) at the Willow WTP.

LSCE's scope of work includes all necessary civil, mechanical, structural, geotechnical and construction management engineering services to support the Willow WTP Phase 1 project and is broken down by the following four tasks:

Task 1 – Prepare Contract for Pre-Purchase of Filtration Equipment
Task 2 – Filter Design Plans and Specifications
Task 3 – Engineering Services During Construction
Task 4 – SWRCB-DDW Permitting Activities

LSCE is prepared to move forward with this work immediately given the goal to place the new Filter online by the end of

2023 / early 2024. The design plans/specifications are anticipated to be completed by end of the year / early 2023. Bidding for the project is targeted to occur in early 2023. Construction of the project is anticipated to be completed by late 2023 or early 2024 - concurrent with the TODB low water demand period.

Also, LSCE recently completed discussions with several water treatment filter vendors and solicited quotes from each vendor for procurement of an additional iron and manganese treatment filter for the Willow Water Treatment Plant (WTP). The new water treatment filter is needed to maintain the filtration capacity of the Willow WTP given the age of the existing Filter A and C valves, controls, media and vessels. The new water treatment filter (Filter #1) will be installed directly adjacent to the Filter A, B, and C bank. Filters A and C will be isolated from service and placed offline.

In the short term (Phase 1 project), the new Filter #1 (rated to 2,200 gpm) and the existing Filter B (rated to 850 gpm) will support the Willow WTP filtration capacity needs to meet the current demands of the system. In the longer term (Phase 2 project), Filters A, B, and C will be removed at the collective end of their service life and replaced with Filter #2, which will be identically sized to Filter #1 for a total future treatment capacity of 4,400 gpm. With the long-term vision of the two filter system online, this will simplify operations, reduce the amount of valves and components that need to be serviced/replaced, and also expand the WTP's total filtration capacity to meet future build out demands.

Quotes for the new Filter #1 were requested from four different iron/manganese treatment vendors which included Loprest/WRT, Filtronics, ATEC, and AdEdge. The quote provided by Loprest/WRT (see attached) was found to be the lowest responsible quote provided. The other vendors were either not interested in providing a quote or provided an estimate higher than Loprest/WRT. Therefore, Staff recommends Board approval of the Loprest/WRT quotation as soon as possible given that the total lead time for procurement is approximately 34-40 weeks, recognizing that our goal is to place the new filter into service by late 2023 / early 2024.

As presented in Loprest/WRT's quote, a single cell filter system (Option A) is estimated at $420,000 whereas a three-cell filter system (Option B) is estimated at $534,000. LSCE recommends proceeding forward with Option A for a one cell filter system given the reduced cost, simpler operation and maintenance, and an equal estimated service life.

Staff will also be working on the necessary project CEQA document for approval at a subsequent Board Meeting.

Previous Relevant Board Actions for This Item

Project was discussed at the June 1, 2022, Water and Wastewater Committee meeting and discussed with the Board under Directors Reports.

Fiscal Impact: Funds are available from the Water Reserves Account
Amount Requested: $600,095 and $90,014 as 15% contingencies
Sufficient Budgeted Funds Available?: Yes
Prog/Fund # Category: TBD

Attachments

1. LSCE Proposal "Scope and Budget for Design Engineering and Construction Support Services for Phase 1 Willow Water Treatment Plant Filter #1 Addition" dated October 26, 2022.

2. Loprest Quotation "Proposal for Iron and Manganese Removal – Willow Expansion" dated September 7, 2022

AGENDA ITEM: F1

Luhdorff & Scalmanini
Consulting Engineers

October 26, 2022
File No. 22-5-087

Ms. Dina Breitstein
General Manager
Town of Discovery Bay
Community Services District
1800 Willow Lake Road
Discovery Bay, CA 94514

SUBJECT: Scope and Budget for Design Engineering and Construction Support Services for Phase 1 Willow Water Treatment Plant Filter #1 Addition

Dear Ms. Breitstein:

Luhdorff and Scalmanini Consulting Engineers (LSCE) is pleased to provide this scope and budget to the Town of Discovery Bay Community Services District (TODB) to provide engineering and construction services for the Phase 1 Willow Water Treatment Plan (WTP) Filter #1 Addition project. The services include the preparation of contract documents for pre-purchasing an additional iron and manganese treatment unit from Loprest Water Treatment Company (Loprest).

BACKGROUND

The Willow WTP was constructed in two phases: Phase I (2003) and Phase II (2006). The Willow WTP has three 850 gallon per minute (gpm) Loprest manufactured filters: A, B and C.

A combination of three onsite wells at the Willow WTP pump raw water to the three filters at the Willow WTP, Wells: 1, 2 and 6. The total well capacity is 4,550 gpm (Well 1 = 1,500 gpm, Well 2 = 850 gpm, and Well 6 = 2,200). However, the TODB cannot operate the three wells at the same time as the capacity of the wells exceed the capacity of the existing filters which are rated to 2,550 gpm (3 x 850 gpm). The TODB either operates Well 6 on its own or Well 1 and 2 together. Thus, the Willow WTP treatment production is limited by the capacity of the existing filters.

In 2022, the TODB repaired and replaced the media in filter B. In the next five years the TODB plans to repair and replace the media in filters A and C. The TODB also needs to replace the existing pneumatic style filter control valves with electric actuated valves. In lieu of replacing the media in filters A and C and the pneumatic valves, LSCE, Veolia and the TODB evaluated different long term project alternatives in consideration of schedule, operational flexibility, capital cost impacts, and filter rehabilitation costs.

The preferred agreed upon project alternative includes two phases. Phase 1 consists of design and construction of a new 12'x20' filter tank (Filter #1, rated at 2,200 gpm) adjacent to the existing filter bank while Phase 2 work would occur in the future and consist of replacement of filters A, B and C with an

identical 12'x20' filter tank (Filter #2, rated at 2,200 gpm). The timing of Phase 2 work would commence once filters A, B and C have reached the end of their useful service life and/or additional plant capacity is needed due to additional demands (estimated in approximately 10-20 years). The scope of the Phase 1 project will include integration of the new filter to the existing raw water, finished water and backwash piping systems as well as the existing electrical/controls system.

SCOPE OF WORK

The scope of work outlined below includes the tasks required to design, oversee construction, participate in startup testing and commission of the new filter vessel. The proposed scope of work items were developed based on our understanding of the Town's needs and our experience with projects of similar size and scope.

Task 1 – Prepare Award Contract for Pre-Purchase of Filtration Equipment

Task 2 – Filter Design Plans and Specifications

Task 3 – Engineering Services During Construction

Task 4 – SWRCB-DDW Permitting Activities

Task 1 – Prepare Award Contract for Pre-Purchase of Filtration Equipment

LSCE will prepare specification documents for the TODB to pre-purchase the filter vessel, internal piping header system, filter media, filter valves, and all other related appurtenances associated with the filter vessel unit directly from Loprest (a division of WRT) given that the existing filters at the Willow WTP are Loprest filters and Loprest will be asked to provide their services for the addition of the new filter. The specification documents to be submitted to Loprest will include: technical specifications for filter materials, piping, valving, coatings, and controls; payment procedures, process requirements and performance expectations, guarantees, and bonding requirements.

A general contractor, selected through a separate bidding procedure as described in Task 3, will install the filter system equipment. The contract document prepared for Loprest will specify the coordination requirements for filter delivery, field tests, startup services, and training for operating the filtration equipment with the TODB's water operator, Veolia.

Task 2 – Filter Design Plans and Specifications

LSCE will develop design plans and specifications for the overall filter and WTP improvements associated with Phase 1 project scope at the Willow WTP. The scope of work covered by the engineering plans and technical specifications will consist of installation of the pre-purchased iron and manganese Loprest filter, new piping, filter tank slab, instrumentation, electrical controls, and SCADA communication. The electrical control logic will be designed to conform to existing TODB control logic and SCADA system which will permit effective communication between the new filter and the TODB's existing central system. Other specific design elements to be addressed in the plans and specifications are:

Best Management Practices (BMPs) – LSCE assumes a SWPPP is not required for this project. LSCE assumed the TODB will prepare the required CEQA documentation. All other applicable mitigation measures will be incorporated including control of storm ***water, construction water, noise, light, work hours, etc.***

General Plansheets - Title page includes general project information (location, contacts, etc.). Additional general sheets include the sheet index, standard symbols, notes and abbreviations.

Civil Plans - Replacement paving, above-ground and below-ground piping for the connection to the existing piping (including detailed fittings and valves), grading plan, etc.

Structural Plans - Structural plans will include design for the new filter tank slab.

Electrical Plans - Electrical plans will include single line, process and instrumentation diagrams, SCADA and radio communication, instrumentation, and electrical conduits required to incorporate the new filter.

Mechanical Plans – Filter supply and backwash piping to incorporate new filter to existing system.

Cathodic Protection Plans – LSCE will solicit the services of JDH Corrosion to provide all cathodic protection design/construction support.

Standard Construction Details - Plans will include pipe supports and other applicable standard details.

Startup and Commissioning - Performance testing of all components and commissioning of the facilities and equipment for approval by the TODB and LSCE.

An general list of anticipated plan set sheets to be developed is as follows:

- G-1: Cover Sheet, Location Map and Index of Sheets
- G-2: General Notes, Legend and Abbreviations
- C-1: Site Plan
- C-2: Demolition Plan
- C-3: Piping Plan
- C-4: Civil Details
- M-1: Filter Tank Assembly – Plan and Sections
- M-2: Filter Tank Assembly – Sections and Details
- M-3: Mechanical Details
- S-1 through S-3: Structural Drawings
- E-1 through E-7: Electrical Drawings
- CP-1 through CP-3: Cathodic Protection Drawings

A set of 50% completion design plans and specifications will be provided to the TODB for review and comment. A meeting will be held with the TODB following the deliverable to discuss comments and changes to the design. If any review comments are not incorporated into the 100% planset, an explanation

will be provided. The 100% planset and technical specifications will be submitted to the CSD and the DDW for review comments and concurrence.

Upon all final edits in the 100% review, LSCE will prepare and deliver a signed and stamped set of Bid Set Plans and Specifications for bidding purposes.

LSCE assumes all design phase plans and specifications will be transmitted electronically to the Town and physical copies are not needed. It is also assumed that only very minor changes will be needed prior to bidding. The final set of plans and specifications will have incorporated all applicable comments and will be issued to each permitting agency for signature (DDW will not sign plans – approval will be in letter form).

LSCE assumes a site survey will not be required. LSCE intends to utilize the existing geotechnical report prepared by Klienfielder when improvements were last made to the Willow WTP for applicable structural design parameters. Compaction testing and concrete testing will be provided by LSCE's subconsultant as discussed in Task 3.

Task 2 Deliverables

- Two (2) digital sets of Plans and Specifications with an Engineer's Estimate for both the 50-percent and 100-percent design.

Task 3 - Engineering Services During Construction

LSCE's approach to providing construction support services involves a close relationship with construction timing, schedule, and administrative processes. The Scope of Work assumes the project is constructed in accordance with the approved Plans and Specifications.

Filter Bidding Assistance

LSCE is knowledgeable of many general contractors and specialty contractors situated throughout northern, and central California. LSCE will work with the Town to identify a minimum of three (3) general and specialty contractors who may be interested in bidding on this project, for the TODB's review and approval. In addition, LSCE plans to advertise the bidding package to the local builders exchanges.

LSCE will conduct a mandatory pre-bid conference with the project manager and project engineer in attendance. Based upon questions from bidders, LSCE will assist the TODB with preparing any required written clarifications and/or addendums to clarify the scope for bidding purposes. Upon publicly opening the bids, LSCE will assist the TODB with reviewing all formal bids to ensure responsiveness with the contract requirements. LSCE will assist the TODB with a thorough background check on qualifications and references, conducted on the three lowest bidders and the findings of that review will be discussed with the TODB. LSCE will prepare a summary of the bid results and assumes the TODB will award to the lowest responsible bidder with LSCE's assistance/recommendation.

Pre-Construction Meeting, Bi-Weekly Meetings

LSCE will hold a pre-construction meeting with TODB and the Contractor, to confirm the Contractor's understanding of the intent of the contract documents. LSCE will attend bi-weekly virtual construction meetings and coordinate with the Contractor and TODB throughout construction to discuss construction progress, inspections, and technical issues during construction. During meetings, LSCE will discuss construction status items such as schedule, change orders, RFIs, inspections, progress payments and any technical issues. LSCE will provide the TODB with progress reports as needed. LSCE will attend a final site visitation (post-construction) with the Contractor and TODB to confirm all final installation, cleanup and restoration of the project. Construction meetings are assumed to occur over an estimated six month construction period.

Submittals and RFI

LSCE will review submittals and requests for information (RFI) submitted by the Contractor according to the 100% design plans and specs. Submittal and RFI spreadsheet logs will be maintained for use in tracking and documenting reviews. After review, LSCE will provide a submittal or RFI response accordingly to the Contractor upon TODB approval.

Concrete & Compaction Testing

LSCE will provide and coordinate with a sub-consultant to perform compaction testing and concrete testing during installation of the new filter by Construction Testing and Engineering, Inc (CTE). Inspection results and field observations will be provided in digital (pdf) format following each inspection. Surveying LSCE assumes a surveying sub-consultant will not be required for the project and construction staking will be performed by the Contractor as needed.

On-Site Inspections

LSCE will provide scheduled on-site milestone inspections including special inspections for electrical (3 total), cathodic protection (1 total), and structural (1 total) elements of the project during the course of construction. In addition, LSCE will provide 2 milestone inspections through the course of construction as well as an additional 2 field inspections to assist with system startup and commissioning of the new filter. The milestone inspections would be used to review components at critical stages. Therefore a total of nine (9) inspections by LSCE and LSCE's subconsultants are assumed. LSCE will prepare an inspection report for each site visit indicating the date and times, people on site, material delivered, work completed, and corrections noted.

As-builts

LSCE will coordinate with the Contractor to develop as-built drawings in AutoCAD representing any field changes differing from the 100% design plans.

Task 3 Deliverables

- Pre-Bid conference in person meeting, agenda
- Bid Addendum (2 total assumed)

- Bid results summary
- Bi-weekly virtual meetings, agendas and minutes (10 total assumed)
- Submittal and RFI reviews/responses (20 Submittals and 5 RFIs assumed)
- Milestone Inspections – 4 Civil Engineer, 3 Electrical Engineer, 1 Structural Engineer, 1 Corrosion Engineer
- Inspection Reports
- As-built drawings.

Task 4 - SWRCB-DDW Permitting Activities

Under Task 4, LSCE will coordinate with the Town and the SWRCB to amend Town's existing water supply permit upon construction completion of the project. LSCE anticipates that the following list of documents (at a minimum) are required to submit a complete permit amendment package. LSCE will contact DDW to ensure that concurrence is obtained, and all questions or comments are addressed. LSCE has completed numerous water supply permit amendments and fully understands the DDW process and required submittals. The DDW checklist items are as follows:

Permit Amendment Application - Submittal will indicate that the actual amendment application will be sent after the project is constructed and tested.

Design Plans and Specifications - Submittal will include final "as-built" engineering drawings and project technical specifications.

Filter Datasheet - Submittal will include completed filter datasheet, template to be provided by SWRCB.

Task 4 Deliverables

- SWRCB-DDW Permit Documents (Revised Operations plan is assumed to be completed by Town/Veolia)

PROPOSED BUDGET

The budget summary associated with the Scope of Work items described above is presented below in the cost table. A detailed cost estimate is also attached.

Task	Description	Outside Services*	LSCE Services	Total	Fiscal Year Expenditure
1	Prepare Award Contract for Pre-Purchase of Filtration Equipment	$863	$8,014	$8,877	2022/2023
2	Filter Design Plans and Specifications	$55,591	$40,157	$95,748	2022/2023
3	Engineering Services During Construction	$25,657	$45,100	$70,957	2023/2024
4	SWRCB-DDW Permitting Activities	$0	$4,514	$4,514	2023/2024
	Total	**$82,110**	**$97,985**	**$180,095**	

**Outside services include the subconsultant costs for structural design, corrosion design, electrical design services, compaction testing and cathodic protection. LSCE will bill monthly for labor and expenses in accordance with LSCE's Schedule of Fees for Engineering and Field services (attached). If LSCE is directed to deviate from the proposed*

scope, or as caused by unforeseen field conditions, LSCE will provide notification of any potential changes in the estimated cost and time and materials to complete the work. LSCE will not proceed with any work that deviates from the approved scope and budget until approval to proceed is granted by the fiscal agent.

In the event that the Town directs LSCE to deviate from the proposed scope of work, or as dictated by unforeseen conditions, LSCE will provide notification of any potential changes in the estimated cost to complete the work. LSCE will not proceed with any work that deviates from the approved scope and budget until approval to proceed is granted by the CSD.

Typical items that may affect the cost of a task include:

- Significant changes in materials cost
- Unforeseen site conditions
- Delays in obtaining required permits
- Items or conditions that could not reasonably be anticipated at the time of proposal preparation
- Delays during construction that extend LSCE's construction administrative roles
- Longer than anticipated review of plans, specifications, and permits by others

PROPOSED SCHEDULE

LSCE will begin design of the project upon obtaining the "Notice to Proceed". LSCE anticipates the design services will be completed in approximately three months assuming timely design review and minimal design comments received between the 50% and 100% design phases. Furthermore, since Loprest has indicated that 10-14 weeks are needed from submittals after execution of the purchase order for the filters, and fabrication will take an additional 24-26 weeks from release, LSCE recommends the Town pre-purchase the filter to ensure that the filter will be ready for installation by end of 2023. LSCE will is prepared to commence with the civil, mechanical, electrical and structural design to integrate the new filter into the WTP immediately. Bidding for the project is targeted to occur in early 2023. Construction of the project is anticipated to be completed by late 2023 or early 2024 in concurrence with the TODB low water demand period.

We appreciate the opportunity to provide you with this scope and budget. LSCE stands ready to proceed with your authorization. Please do not hesitate to contact Jason Coleman at (530) 661-0109 or jcoleman@lsce.com should you have any questions or require any additional information.

Sincerely,
LUHDORFF AND SCALMANINI
CONSULTING ENGINEERS

Jason Coleman, P.E.
Supervising Engineer

Oscar Serrano, PE
Senior Engineer

Attachments

A. Budget Estimate Worksheet FY22/23
B. 2022 Schedule of Fees for Engineering and Field Services

Client: Town of Discovery Bay
Project: Willow WTP Filter Addition
Estimated By: OS, JC
Date: October 12, 2022

Cost Estimate for Phase 1 Willow WTP Filter #1 Addition

Luhdorff & Scalmanini Consulting Engineers

	LSCE (hours and fee)						SUBCONSULTANT (lump sum fee)				DIRECT EXPENSES		TOTALS
	Principal Professional	Supervising Professional	Senior Professional	Staff Professional	AutoCAD Drafter/GIS	Clerical	EPS (Electrical)	Finn Design (Structural)	CTE (Compaction & Concrete)	JDH (Corrosion)	Travel Expenses	Copies / Other	
Task Name and Activities	$225	$220	$200	$155	$145	$87					Incurred	Incurred	
Task 1: Prepare Award Contract for Pre-Purchase of Filter Equipment													
Develop Filter Contract Specifications		4	8	12									
Assist with Procurement		2	6	12		2							
LSCE (hours)	**0**	**6**	**14**	**24**	**0**	**2**							**46**
LSCE (cost)	**$0**	**$1,320**	**$2,800**	**$3,720**	**$0**	**$174**							**$8,014**
Subconsultant							**$863**						**$863**
Direct Expenses											**$0**	**$0**	**$0**
												Task 1 Subtotal	**$8,877**
Task 2: Filter Design and Specifications													
50% Plans, Specifications and Cost Estimate	2	6	20	16	64	2	$25,935						
100% Plans, Specifications and Cost Estimate	1	4	12	8	42	2	$12,406						
Bid Set		2	4	6	12	2							
Design Review Meetings (2)		8	16	8	8								
LSCE (hours)	**3**	**20**	**52**	**38**	**126**	**6**							**245**
LSCE (cost)	**$675**	**$4,400**	**$10,400**	**$5,890**	**$18,270**	**$522**							**$40,157**
Subconsultant							**$38,341**	**$7,475**		**$9,775**			**$55,591**
Direct Expenses											**$0**	**$0**	**$0**
												Task 2 Subtotal	**$95,748**
Task 3: Engineering Services During Construction													
Bidding Assistance: Agenda, Pre-Bid Meeting, Addendum (1), Bid Review		8	16	12	4						$100		
Pre-Construction Meeting, bi-weekly virtual meetings (10)			26	26							$100		
Submittals, RFI		12	25	56									
Inspections (9)			24	20									
Concrete & Compaction Testing, Rebar Inspection									$4,497				
As-Builts		2	6		18								
LSCE (hours)	**0**	**22**	**97**	**114**	**22**	**0**							**255**
LSCE (cost)	**$0**	**$4,840**	**$19,400**	**$17,670**	**$3,190**	**$0**							**$45,100**
Subconsultant							**$10,810**	**$4,600**	**$4,497**	**$5,750**			**$25,657**
Direct Expenses											**$200**	**$0**	**$200**
												Task 3 Subtotal	**$70,957**
Task 4: SWRCB-DDW Permitting Activities													
Prepare Permit Amendment Package		4	8	12		2							
LSCE (hours)	**0**	**4**	**8**	**12**	**0**	**2**							**26**
LSCE (cost)	**$0**	**$880**	**$1,600**	**$1,860**	**$0**	**$174**							**$4,514**
Subconsultant													**$0**
Direct Expenses													**$0**
												Task 4 Subtotal	**$4,514**
Total LSCE Hours	**3**	**52**	**171**	**188**	**148**	**10**							**572**
Total LSCE Cost	**$675**	**$11,440**	**$34,200**	**$29,140**	**$21,460**	**$870**							**$97,785**
Total Sub-Consultant Cost							**$50,014**	**$12,075**	**$4,497**	**$15,525**			**$82,111**
Total Direct Expenses Cost											**$200**	**$0**	**$200**
												COST PROPOSAL - TOTAL	**$180,096**

* Sub-Consultant costs include 15% markup

Luhdorff & Scalmanini
Consulting Engineers

500 FIRST STREET • WOODLAND, CA 95695

2022 SCHEDULE OF FEES

ENGINEERING AND RELATED FIELD SERVICES

Professional*

Senior Principal	$235/hr.
Principal Professional	$225 to 230/hr.
Supervising Professional	$210 to 220/hr.
Senior Professional	$175 to 210/hr.
Project Professional	$155 to 175/hr.
Staff Professional	$135 to 155/hr.

Technical

Engineering Inspector	$140/hr.
ACAD Drafting/GIS	$142/hr.
Engineering Assistant	$115 to 140/hr.
Scientist	$115 to 140/hr.
Technician	$115 to 140/hr.

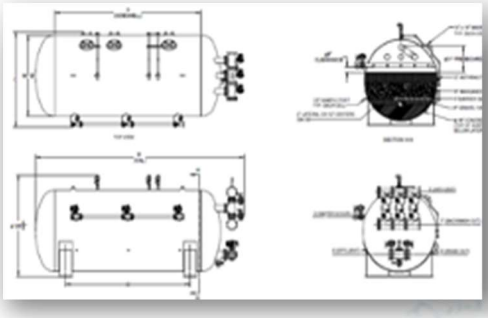
Clerical Support

Word Processing, Clerical	$90/hr.
Digital Communications Specialist	$90 to 100/hr.
Project Admin/Accounting Assistant	$90 to 110/hr.

Vehicle Use	$0.58/mi.
Subsistence	Cost Plus 15%
Groundwater Sampling Equipment (Includes Operator)	$170.00/hr
Copies	$0.20 ea.

Professional or Technical Testimony	200% of Regular Rates
Technical Overtime (if required)	150% of Regular Rates
Outside Services/Rentals	Cost Plus 15%
Services by Associate Firms	Cost Plus 15%

** Engineer, Geologist, Hydrogeologist, and Hydrologist*



DESIGN

DEVELOP

DELIVER

Proposal for Iron and Manganese Removal

Willow Expansion

Wells 1, 2, 6, Discovery Bay, California

September 7, 2022

Loprest Representative Contact
Jeff Frey, Envirotrol
Email: envirotrolrep@aol.com
Phone: 916-939-7924

Loprest Contact
Randy Richey, Loprest Division President
Email: rrichey@wrtnet.com
Phone: 303-403-5487

Quote Number 22-069R1

LOPREST
A DIVISION OF WRT™

Water Treatment Solutions Since 1928
loprest.com

901 W. 116th Ave., Suite 400 • Westminster, CO 80234 • 303-424-5355

Iron & Manganese Removal

PROCESS DESCRIPTION

Iron and Manganese will be oxidized catalytically by the manganese oxide coating on the Manganese GreensandPlus media in the presence of a chlorine oxidant, filtered out by the anthracite and GreensandPlus media, and backwashed to waste.

GREENSAND+ MEDIA

- High filtration rate
- Longer runtimes
- Low waste volumes
- Limited chemical addition

About Loprest

LOPREST'S CAPABILITIES

- Design and manufacturing of treatment systems: 10 to 10,000 GPM
- Process design for the removal of numerous contaminants
- Pressure filters, ion exchange systems, activated carbon systems
- Controls design, manufacturing, and programming
- Onsite filter inspection, evaluation, and maintenance

EFFICIENT Energy- and water-efficient designs to meet client needs

ECONOMICAL Design choices such as multi-cell horizontal filters and stainless steel underdrains reduce cost of ownership

PROVEN Thousands of treatment systems, over 90 years of experience

Complete System

Complete filtration system for iron and manganese removal:

- Filter Vessels and Media
- System Valving
- System commissioning

Can be added to any new or existing potable water system.

AUTOMATED BACKWASH (OPTION B)

When one cell is in the backwash mode, the other cells will remain in filtration mode to provide treated water for backwashing. The filter cells will backwash sequentially.

F1-2

Design Parameters

The treatment system shall be specifically designed to remove the target contaminants from the groundwater supply. All components and media in contact with water are NSF-61 compliant for potable water consumption.

The treatment system shall be designed based on the following parameters:

INFLUENT WATER QUALITY

Total Iron	ND
Total Manganese	0.099 PPM

SIZING

	Option A	Option B
System Design Flow Rate	2,200 GPM	2,200 GPM
Number of Filters	1	1
Number of Cells per Filter	1	3
Filter Area per Filter	276 SQ FT	276 SQ FT
Hydraulic Loading Rate	7.97 GPM / SQ FT	7.97 GPM / SQ FT
Maximum Design Pressure	125 PSI	125 PSI
Anthracite Bed Depth	12 IN	12 IN
GreensandPlus Bed Depth	18 IN	18 IN
Estimated Service Cycle	> 24 HRS	> 24 HRS
Backwash Flow Rate	3,300 GPM	1,380 GPM
Water Scour Rate (Included in backwash rate)	552 GPM	184 GPM
Waste Volume per Backwash	38,000 GAL	42,000 GAL
Estimated Operating Weight per Filter	279,000 LBS	293,000 LBS

EFFLUENT WATER QUALITY

Total Iron	< 0.1 PPM
Total Manganese	< 0.05 PPM

Note: Design parameters can be modified to accommodate site-specific limitations.

F1-2

Scope of Supply – Option A

Engineering	Engineering including submittals, calculations, seismic, and installation instructions
Filter Vessel	One (1) ASME Code 125 psi horizontal vessel: 12’ diameter x 20’ sideshell Internal lining: NSF-600 Epoxy, external coat: Epoxy prime, with topcoat
Internals	Upper: fully perforated header, SS304, @ 12” Middle: water scour enhanced media cleaning system, SS304, @ 6” Lower: full-length header with wedgewire laterals, SS304, @ 12”
Filtration Media	187 CU FT support media 717 CU FT filter media
Electrically Actuated Butterfly Valves	(5) Discrete @ 12”, and (1) Discrete @ 6”
Other Valves	(2) Air/vacuum release valves
Electromagnetic Flow Meters	(1) Effluent flow meter @ 12”
Pressure Transmitters	(1) Differential pressure transmitter
Pressure Gauges	(2) Pressure gauges with sample taps
Valve Controls	(1) Valve relay panel with selector switches
Start-up and Commissioning	Rinse to quality, operation training Operation and Maintenance Manual

Scope of Supply – Option B

Engineering	Engineering including submittals, calculations, seismic, and installation instructions
Filter Vessel	One (1) ASME Code 125 psi horizontal vessel: 12’ diameter x 20’ sideshell Internal lining: NSF-600 Epoxy, external coat: Epoxy prime, with topcoat
Internals	Upper: (3) fully perforated headers, SS304, @ 10” Middle: (3) water scour enhanced media cleaning systems, SS304, @ 4” Lower: full-length header with wedgewire laterals, SS304, @ 12”
Filtration Media	187 CU FT support media 717 CU FT filter media
Electrically Actuated Butterfly Valves	(2) Discrete @ 12, (6) Discrete @ 10” and (3) Discrete @ 4”
Other Valves	(2) Air/vacuum release valves
Electromagnetic Flow Meters	(1) Effluent flow meter @ 12”
Pressure Transmitters	(1) Differential pressure transmitter
Pressure Gauges	(2) Pressure gauges with sample taps
Valve Controls	(1) Valve relay panel with selector switches
Start-up and Commissioning	Rinse to quality, operation training Operation and Maintenance Manual

F1-2

Firm Pricing

SINGLE CELL SYSTEM – OPTION A as described above	**$420,000**
THREE-CELL SYSTEM – OPTION B as described above	**$534,000**
California Sales Tax	**Additional**

PAYMENT TERMS

- 15% with Purchase
- 10% upon submitted drawings
- 25% upon release for fabrication
- 40% upon delivery to site
- 10% upon system commissioning

Payment of invoices is due in full within 30 days of the date of the

DELIVERY

- 10-14 weeks for submittals after execution of purchase order
- 24-26 weeks for delivery after approval of submitted drawings

NOTES

- This proposal is based upon today's costs and is valid for a period of 30 days.
- System shipped as vessels, media, valves, piping, and accessories loose for field assembly by Contractor.
- Concrete subfill required but not included, approx. 398 CF per tank needed
- No offloading, setting, or installation.
- Taxes, bonding, and permitting not included.
- Pricing is based on Loprest standard terms and conditions.
- Pricing includes freight to site.

F1-2

Standard Terms and Conditions

1. **Payment.** Unless otherwise agreed by the parties in writing, payment for all products purchased pursuant to this Agreement shall be made within 30 day of Seller's invoice. Any amount not paid as agreed shall be subject to an interest charge of 1% per month, compounded monthly. Buyer will be liable for all of Buyer's costs to collect amounts due under this agreement, including reasonable attorney's fees, whether or not any collection action is commenced.

2. **Limited Warranty.** Seller warrants the products sold to the Buyer to be free of defects in materials and workmanship for a period of one year after the products are delivered to Buyer. In the event of any such defect in the products during the warranty period, Seller will provide all parts and labor necessary to correct such defect.

3. **Disclaimer Of Implied Warranties; Limitation Of Remedies.** THE BUYER'S SOLE AND EXCLUSIVE REMEDY UNDER THE LIMITED WARRANTY PROVIDED HEREIN SHALL BE THE PARTS AND LABOR AS PROVIDED IN THIS AGREEEMENT. ALL IMPLIED WARRANTIES, INCLUDING THOSE OF **MERCHANTABILITY** AND OF **FITNESS FOR A PARTICULAR PURPOSE** ARE EXCLUDED. SELLER SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE BREACH OF ANY WARRANTIES WITH RESPECT TO THE PRODUCTS PURCHASED PURSUANT TO THIS AGREEMENT.

4. **Waiver of and Indemnification for Claims.** BUYER HEREBY AGREES TO WAIVE, RELEASE, DISCHARGE, INDEMNIFY AND HOLD SELLER HARMLESS FOR ANY AND ALL CLAIMS FOR DAMAGES FOR DEATH, PERSONAL INJURY OR PROPERTY DAMAGE WHICH IT OR THIRD PARTIES MAY HAVE OR WHICH MAY HEREAFTER ACCRUE AS A RESULT OF THE BUYERS' USE OF THE PRODUCTS SOLD PURSUANT TO THIS AGREEMENT.

5. **Intellectual Property.** To the extent the products sold pursuant to this Agreement contain, reflect or consist of the Seller's intellectual property, the sale does not include a sale of such intellectual property or of a license to use such intellectual property beyond the use by the Buyer of the products sold.

6. **Assignment.** In the event that Buyer assigns its rights and obligations under this Agreement any assignment of its payment obligation will be ineffective and Seller will remain jointly and severally liable, with its assignee, to pay all amounts due pursuant to this Agreement.

7. **Non-Reliance on Written or Oral Statements**. Buyer has relied on its own investigation about the qualities and performance of the products purchased pursuant to this Agreement and has not relied upon the written or oral statements of Seller or its representatives in entering into this Agreement.

8. **Only Agreement.** This is the only Agreement between the Buyer and Seller relating to the products purchased pursuant to this Agreement, and no oral or other statements, not contained herein, shall be binding on either the Buyer or the Seller.

9. **Modification.** The terms of this Agreement may not be modified, except in a writing signed by the party to be bound.

10. **Non-Waiver; Severability.** Waiver by either party hereto of non-performance of any term, provision, covenant, obligation or condition of this Agreement shall not be considered a waiver of any subsequent nonperformance, nor as waiver of the term, provision, covenant, obligation or condition itself. If any provision of this Agreement is found to be prohibited, invalid or unenforceable, such finding will not invalidate or render unenforceable any remaining provisions of this Agreement.

11. **Arbitration.** Any disputes arising in any way in connection with this Agreement or the products sold by the Seller shall be resolved by binding arbitration under the Colorado Uniform Arbitration Act (C.R.S. § 13-22-201 *et seq.*) (the "Act"). The parties agree that the District Court of Jefferson County, Colorado shall have jurisdiction over them for the purposes of applying the provisions of the Act. All arbitration proceedings shall take place within the greater metropolitan area of Denver, Colorado. Buyer will reimburse Seller for all attorney's fees incurred by Seller in any arbitration (for collection or otherwise) in which Seller prevails.

12. **Governing Law.** This Agreement and any disputes or claims arising from it shall be governed by and construed according to the laws of the State of Colorado.

F1-2

LOPREST
A DIVISION OF WRT™

Water Treatment Solutions Since 1928
loprest.com

WRT

Clean water. Clean earth. That's our promise.®

WRT is the parent company of Loprest. For more information about our services, call 303.424.5355 or visit wrtnet.com.

Corporate Offices: 901 W. 116th Ave., Suite 400 • Westminster, CO 80234